

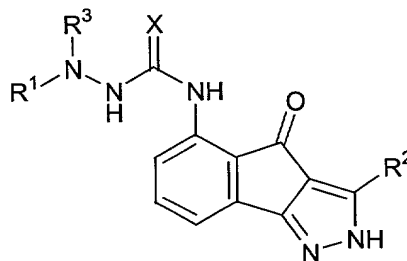
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CLAIMS

What is claimed is:

1. A compound according to formula (I):

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(I)

X is selected from O or S;

- 15 R^1 is selected from the groups: C₃-C₁₀ membered carbocycle substituted with 0-5 R^4 , and 3-10 membered heterocycle substituted with 0-5 R^5 , provided that if R^1 is phenyl then R^1 is substituted with 1-5 R^4 ;
- R^2 is selected from the groups: H, C₁-10 alkyl substituted with 0-3 R^6 , C₂-10 alkenyl substituted with 0-3 R^6 , C₂-10 alkynyl substituted with 0-3 R^6 , - (CF₂)_mCF₃, C₃-10 membered carbocycle substituted with 0-5 R^4 , and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted
- 25 with 0-5 R^5 ;
- R^3 is selected from the groups: H, C₁-4 alkyl, C₃-6 cycloalkyl, or C₄-10 cycloalkylalkyl;

5 R^4 is independently selected from the groups: halo, -CN, NO₂, C₁₋₄ alkyl, C₁₋₄ haloalkyl, NR^7R^{7a} , =O, OR⁷, COR⁷, CO₂R⁷, CONR⁷R^{7a}, NHC(O)NR⁷R^{7a}, NHC(S)NR⁷R^{7a}, NR⁷C(O)OR^{7b}, NR⁷C(O)R^{7b}, SO₂NR⁷R^{7a}, SO₂R^{7b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from
10 O, N, and S;

alternatively, when two R^4 's are present on adjacent carbon atoms they combine to form -OCH₂O- or -OCH₂CH₂O-;

R^5 is independently selected from the groups: halo, -CN, NO₂, C₁₋₄ alkyl, C₁₋₄ haloalkyl, NR^7R^{7a} , NR⁷C(O)OR^{7b},
15 NR⁷C(O)R^{7b}, OR⁷, COR⁷, CO₂R⁷, CONR⁷R^{7a}, CON(R⁹)[(CH₂)_mR¹⁰], CO(CH₂)_mR¹⁰, NHC(O)NR⁷R^{7a}, NHC(S)NR⁷R^{7a}, SO₂NR⁷R^{7a}, and SO₂R^{7b};

R^6 is independently selected from the groups: halo, -CN, NO₂, C₁₋₄ alkyl, C₁₋₄ haloalkyl, NR^7R^{7a} , NR⁸NR⁸R^{8a},
20 NR⁷C(O)OR⁷, NR⁷C(O)R^{7b}, =O, OR⁷, COR⁷, CO₂R⁷, CONR⁷R^{7a}, NHC(O)NR⁷R^{7a}, NHC(S)NR⁷R^{7a}, SO₂N⁷R^{7a}, SO₂R^{7b}, C₃₋₁₀ membered carbocycle substituted with 0-5 R^4 , and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^7 ;

25 R^7 is independently selected from the groups: H, halo, -CN, NO₂, C₁₋₄ haloalkyl, R⁸R^{8a}N(CR⁹R^{9a})_m, NR⁸NR⁸R^{8a}, NR⁸C(O)OR⁸, NR⁸C(O)R⁸, =O, R⁸O(CR⁹R^{9a})_m, COR⁸, CO₂R⁸, CONR⁸R^{8a}, NHC(O)NR⁸R^{8a}, NHC(S)NR⁸R^{8a}, SO₂NR⁸R^{8a}, SO₂R^{8b}, C₁₋₄alkyl, C₃₋₆cycloalkyl, C₄₋₁₀cycloalkylalkyl, phenyl,
30 and benzyl;

5 R^{7a} is independently selected from the groups: H, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀ cycloalkylalkyl, phenyl, and benzyl;

alternatively, R^7 and R^{7a} , together with the atoms to which they are attached, form a heterocycle having 4-8
10 atoms in the ring and containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{7c} ;

R^{7b} is independently selected from the groups: H, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀ cycloalkylalkyl, phenyl, and benzyl;

15 R^{7c} is independently selected from the groups: halo, -CN, N₃, NO₂, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀ cycloalkylalkyl, C₁₋₄ haloalkyl, NR^7R^{7b} , $R^8R^{8a}N(CR^9R^{9a})_m$, =O, OR⁷, $R^8O(CR^9R^{9a})_m$, COR⁷, CO₂R⁷, CONR⁷R^{7b}, NHC(O)NR⁷R^{7b}, NHC(S)NR⁷R^{7b}, NR⁷C(O)OR^{7b}, NR⁷C(O)R^{7b},
20 C(=NR⁸)R^{8a}, C(=NR⁸)NR^{8a}R^{8b}, SO₂NR⁷R^{7b}, SO₂R^{7b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

R^8 is independently selected from the groups: H, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀ cycloalkylalkyl, phenyl and
25 benzyl;

R^{8a} is independently selected from the groups: H, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀ cycloalkylalkyl, phenyl and benzyl;

alternatively, R^8 and R^{8a} , together with the atoms to which they are attached, form a heterocycle having 4-8
30 atoms in the ring and containing an additional 0-1 N, S, or O atom;

5 R^{8b} is independently selected from the groups: H, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀ cycloalkylalkyl, phenyl and benzyl;

R⁹ is independently selected from the groups: H, C₁₋₄ alkyl;

10 R^{9a} is independently selected from the groups: H, C₁₋₄ alkyl;

R¹⁰ is independently selected from the groups: NR⁷R^{7a}, C₃₋₁₀ membered carbocycle substituted with 0-3 R⁷, and 5-10 membered heterocycle containing from 1-4 heteroatoms

15 selected from O, N, and S, substituted with 0-3 R⁷; and m is independently selected from 0, 1, 2, 3, and 4; or a pharmaceutically acceptable salt thereof, a pharmaceutically acceptable prodrug form thereof, an N-oxide form thereof, or a stereoisomer thereof.

20

2. A compound according to claim 1, wherein:

X is O;

R¹ is selected from the groups: C_{5-C6} membered carbocycle substituted with 0-5 R⁴, and 5-6 membered heterocycle

25 substituted with 0-5 R⁵.

3. A compound according to claim 1, wherein:

X is O;

R¹ is a C_{5-C6} membered carbocycle substituted with 0-5

R⁴, wherein the carbocycle is an aryl, cycloalkyl, or

30 cycloalkenyl group.

4. A compound according to claim 1, wherein:

X is O;

R¹ is phenyl substituted with 0-5 R⁴.

5

5. A compound according to claim 1, wherein:

X is O;

10 R¹ is a C₅-C₆ membered cycloalkyl group substituted with
0-5 R⁴, wherein the cycloalkyl is cyclohexyl,
cyclopentyl.

6. A compound according to claim 1, wherein:

X is O;

15 R¹ is a C₅-C₆ membered cycloalkenyl group substituted
with 0-5 R⁴, wherein the cycloalkenyl group is
cyclohexenyl, cyclopentenyl.

7. A compound according to claim 1, wherein:

X is O;

20 R¹ is a C₅-C₇ membered heterocycle substituted with 0-5
R⁵, wherein the heterocycle is a
heteroaryl, heterocyclenyl, or heterocyclyl group.

8. A compound according to claim 1, wherein:

25 X is O;

R¹ is a C₅-C₆ membered heteroaryl substituted with 0-5
R⁵, wherein the heteroaryl is pyrazinyl, thienyl,
isothiazolyl, oxazolyl, pyrazolyl, furazanyl, pyrrolyl,
1,2,4-thiadiazolyl, pyridazinyl, quinoxalinyl,
30 phthalazinyl, imidazo[1,2-a]pyridine, imidazo[2,1-
b]thiazolyl, benzofurazanyl, azaindolyl, benzimidazolyl,
benzothienyl, thienopyridyl, thienopyrimidyl,
pyrrolopyridyl, imidazopyridyl, benzoazaindole,
1,2,4-triazinyl, benzthiazolyl, furanyl, imidazolyl,
35 indolyl, indolizinyl, isoxazolyl, isoquinolinyl,

5 isothiazolyl, oxadiazolyl, pyrazinyl, pyridazinyl,
pyrazolyl, pyridyl, pyrimidinyl, pyrrolyl, quinazolinyl,
quinolinyl, 1,3,4-thiadiazolyl, thiazolyl, thienyl or
triazolyl.

10 9. A compound according to claim 1, wherein:

X is O;

R^1 is a C₅-C₆ membered heteroaryl substituted with 0-5

R^5 , wherein the heteroaryl is pyrazinyl, pyridazinyl,
pyridyl, pyrimidinyl, thiazolyl or thienyl.

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10. A compound according to claim 1, wherein:

X is O;

R^1 is a C₅-C₆ membered heterocyclyl substituted with 0-5

R^5 , wherein the heterocyclyl is tetrahydropyranyl,

20 pyrrolidinyl, imidazolidinyl, pyrazolidinyl, piperidinyl,
morpholinyl, thiomorpholinyl, or piperazinyl.

11. A compound according to claim 1, wherein:

X is O;

25 R^1 is a C₅-C₆ membered heterocyclyl substituted with 0-5

R^5 , wherein the heterocyclyl is tetrahydropyranyl or
morpholinyl.

12. A compound according to claim 1, wherein:

30 X is O;

R^1 is a C₅-C₆ membered heterocyclenyl group substituted
with 0-5 R^5 , wherein the heterocyclenyl group is 1,2,3,4-
tetrahydrohydropyridine, 1,2-dihydropyridyl,
1,4-dihydropyridyl, 1,2,3,6-tetrahydrohydropyridine, 1,4,5,6-
35 tetrahydropyrimidine, 2-pyrrolinyl, 3-pyrrolinyl, 2-

5 imidazolinyl, 2-pyrazolinyl, 3,4-dihydro-2H-pyran, or dihydrofuranyl.

13. A compound according to claim 1, wherein:
X is O;

10 R^3 is selected from the groups: H, C₁₋₄ alkyl.

14. A compound according to claim 1, wherein:
X is O;
 R^3 is methyl.

15

15. A compound according to claim 1, wherein:
X is O;
 R^2 is a C₃₋₁₀ membered carbocycle substituted with 0-5
 R^4 , or a 3-10 membered heterocycle containing from 1-4
20 heteroatoms selected from O, N, and S and substituted
with 0-5 R^5 .

16. A compound according to claim 1, wherein:
X is O;

25 R^2 is C_{5-C6} membered carbocycle substituted with 0-5 R^4 ,
wherein the carbocycle is an aryl, cycloalkyl, or
cycloalkenyl group.

17. A compound according to claim 1, wherein:
30 X is O;
 R^2 is phenyl substituted with 0-5 R^4 .

18. A compound according to claim 1, wherein:
X is O;

5 R^2 is cycloalkyl substituted with 0-5 R^4 , a C₅-C₆
 membered cycloalkyl group substituted with 0-5 R^4 ,
 wherein the cycloalkyl is cyclohexyl, cyclopentyl.

19. A compound according to claim 1, wherein:

10 X is O;

R^2 is a C₅-C₆ membered cycloalkenyl group substituted
 with 0-5 R^4 , wherein the cycloalkenyl group is
 cyclohexenyl, cyclopentenyl.

15 20. A compound according to claim 1, wherein:

X is O;

R^2 is a C₅-C₇ membered heterocycle substituted with 0-5
 R^5 , wherein the heterocycle is a
 heteroaryl, heterocyclenyl, or heterocyclyl group.

20

21. A compound according to claim 1, wherein:

X is O;

R^2 is a C₅-C₆ membered heteroaryl substituted with 0-5
 R^5 , wherein the heteroaryl is pyrazinyl, thienyl,
 25 isothiazolyl, oxazolyl, pyrazolyl, furazanyl, pyrrolyl,
 1,2,4-thiadiazolyl, pyridazinyl, quinoxaliny, phthalazinyl,
 imidazo[1,2-a]pyridine, imidazo[2,1-b]thiazolyl, benzofurazanyl,
 azaindolyl, benzimidazolyl, benzothienyl, thienopyridyl,
 thienopyrimidyl,
 30 pyrrolopyridyl, imidazopyridyl, benzoazaindole,
 1,2,4-triazinyl, benzthiazolyl, furanyl, imidazolyl,
 indolyl, indoliziny, isoxazolyl, isoquinoliny, isothiazolyl,
 oxadiazolyl, pyrazinyl, pyridazinyl, pyrazolyl, pyridyl,
 pyrimidinyl, pyrrolyl, quinazolinyl,

5 quinolinyl, 1,3,4-thiadiazolyl, thiazolyl, thienyl or triazolyl.

22. A compound according to claim 1, wherein:

X is O;

10 R^2 is a C₅-C₆ membered heteroaryl substituted with 0-5 R^5 , wherein the heteroaryl is pyrazinyl, pyridazinyl, pyridyl, pyrimidinyl, thiazolyl or thienyl.

23. A compound according to claim 1, wherein:

15 X is O;

R^2 is a C₅-C₆ membered heterocyclyl substituted with 0-5 R^5 , wherein the heterocyclyl is tetrahydropyranyl, pyrrolidinyl, imidazolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, thiomorpholinyl, or piperazinyl.

20

24. A compound according to claim 1, wherein:

X is O;

R^2 is a C₅-C₆ membered heterocyclenyl group substituted with 0-5 R^5 , wherein the heterocyclenyl group is 1,2,3,4-tetrahydrohydropyridine, 1,2-dihydropyridyl, 1,4-dihydropyridyl, 1,2,3,6-tetrahydrohydropyridine, 1,4,5,6-tetrahydropyrimidine, 2-pyrrolinyl, 3-pyrrolinyl, 2-imidazolinyl, 2-pyrazolinyl, 3,4-dihydro-2H-pyran, or dihydrofuranyl.

30

25. A compound according to claim 1, wherein:

X is O;

R^2 is phenyl substituted with 1-5 R^4 .

35 26. A compound according to claim 1, wherein:

5 X is O;

R² is phenyl substituted with 1-4 R⁴.

27. A compound according to claim 1, wherein:

X is O;

10 R² is phenyl substituted with 1-3 R⁴.

28. A compound according to claim 1, wherein:

X is O;

R² is phenyl substituted with 1-2 R⁴.

15

29. A compound according to claim 1, wherein:

X is O;

R² is phenyl substituted with R⁴;

R⁴ is a 5-10 membered heterocycle containing from 1-4

20 heteroatoms selected from O, N, and S, wherein the heterocycle is a heteroaryl, heterocyclenyl, or heterocyclyl group.

30. A compound according to claim 1, wherein:

25 X is O;

R² is phenyl substituted with R⁴;

R⁴ is a 5-6 membered heteroaryl containing from 1-4 heteroatoms selected from O, N, and S, which is substituted with 0-5 R⁵.

30

31. A compound according to claim 1, wherein:

X is O;

R² is phenyl substituted with R⁴;

R⁴ is NR⁷R^{7a}.

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32. A compound according to claim 1, wherein:

X is O;

R^2 is phenyl substituted with R^4 ;

R^4 is NR^7R^{7a} ;

- 10 R^7 and R^{7a} , together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{7c} ; and

- 15 R^{7c} is independently selected from the groups: halo, -CN, N_3 , NO_2 , C_{1-4} alkyl, C_{3-6} cycloalkyl, C_{4-10} cycloalkylalkyl, C_{1-4} haloalkyl, NR^7R^{7b} , $R^8R^{8a}N(CR^9R^{9a})_m$, =O, OR^7 , $R^8O(CR^9R^{9a})_m$, COR^7 , CO_2R^7 , $CONR^7R^{7b}$, $NHC(O)NR^7R^{7b}$, $NHC(S)NR^7R^{7b}$, $NR^7C(O)OR^{7b}$, $NR^7C(O)R^{7b}$, $C(=NR^8)R^{8a}$, $C(=NR^8)NR^{8a}R^{8b}$, $SO_2NR^7R^{7b}$, SO_2R^{7b} , and 5-10
20 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

33. A compound according to claim 1, wherein:

X is O;

- 25 R^2 is phenyl substituted with R^4 ;

R^4 is NR^7R^{7a} ;

- R^7 and R^{7a} , together with the atoms to which they are attached, form a heterocycle having 6-7 atoms in the ring and containing an additional 0-1 N atoms and substituted
30 with 0-3 R^{7c} ; and

R^{7c} is independently selected from the groups: halo, -CN, N_3 , NO_2 , C_{1-4} alkyl, C_{3-6} cycloalkyl, C_{4-10} cycloalkylalkyl, C_{1-4} haloalkyl, NR^7R^{7b} , $R^8R^{8a}N(CR^9R^{9a})_m$,

5 =O, OR⁷, R⁸O(CR⁹R^{9a})_m, COR⁷, CO₂R⁷, CONR⁷R^{7b},
 NHC(O)NR⁷R^{7b}, NHC(S)NR⁷R^{7b}, NR⁷C(O)OR^{7b}, NR⁷C(O)R^{7b},
 C(=NR⁸)R^{8a}, C(=NR⁸)NR^{8a}R^{8b}, SO₂NR⁷R^{7b}, SO₂R^{7b}, and 5-10
 membered heterocycle containing from 1-4 heteroatoms
 selected from O, N, and S.

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34. A compound according to claim 1, wherein:

X is O;

R² is phenyl substituted with R⁴;

R⁴ is NR⁷R^{7a};

15 R⁷ and R^{7a}, together with the atoms to which they are
 attached, form a 6-7 membered heterocyclyl group or a 6-7
 membered heterocyclenyl group, substituted with 0-3 R^{7c};
 and

R^{7c} is independently selected from the groups: halo, -CN
 20 , N₃, NO₂, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₄₋₁₀
 cycloalkylalkyl, C₁₋₄ haloalkyl, NR⁷R^{7b}, R⁸R^{8a}N(CR⁹R^{9a})_m,
 =O, OR⁷, R⁸O(CR⁹R^{9a})_m, COR⁷, CO₂R⁷, CONR⁷R^{7b},
 NHC(O)NR⁷R^{7b}, NHC(S)NR⁷R^{7b}, NR⁷C(O)OR^{7b}, NR⁷C(O)R^{7b},
 C(=NR⁸)R^{8a}, C(=NR⁸)NR^{8a}R^{8b}, SO₂NR⁷R^{7b}, SO₂R^{7b}, and 5-10
 25 membered heterocycle containing from 1-4 heteroatoms
 selected from O, N, and S.

35. A compound according to claim 1, wherein:

X is O;

30 R² is phenyl substituted with R⁴;

R⁴ is NR⁷R^{7a};

R⁷ and R^{7a}, together with the atoms to which they are
 attached, form a 6-7 membered heterocyclyl group

5 substituted with 0-3 R^{7c} , wherein the heterocyclyl group is piperazinyl, or homopiperazinyl, and R^{7c} is independently selected from the groups: halo, -CN, N_3 , NO_2 , C_{1-4} alkyl, C_{3-6} cycloalkyl, C_{4-10} cycloalkylalkyl, C_{1-4} haloalkyl, $NR^{7R^{7b}}$, $R^8R^{8a}N(CR^9R^{9a})_m$,
 10 $=O$, OR^7 , $R^8O(CR^9R^{9a})_m$, COR^7 , CO_2R^7 , $CONR^{7R^{7b}}$, $NHC(O)NR^{7R^{7b}}$, $NHC(S)NR^{7R^{7b}}$, $NR^7C(O)OR^{7b}$, $NR^7C(O)R^{7b}$, $C(=NR^8)R^{8a}$, $C(=NR^8)NR^{8a}R^{8b}$, $SO_2NR^{7R^{7b}}$, SO_2R^{7b} , and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

15

36. A compound according to claim 1, wherein:

X is O;

R^2 is phenyl substituted with R^4 ;

R^4 is $NR^{7R^{7a}}$;

20 R^7 and R^{7a} , together with the atoms to which they are attached, form a 6-7 membered heterocyclenyl group

substituted with 0-3 R^{7c} , wherein the heterocyclenyl group is ,2,3,4- tetrahydrohydropyridine,

1,2-dihydropyridyl, 1,4-dihydropyridyl,

25 1,2,3,6-tetrahydropyridine, or 1,4,5,6-tetrahydropyrimidine; and

R^{7c} is independently selected from the groups: halo, -CN, N_3 , NO_2 , C_{1-4} alkyl, C_{3-6} cycloalkyl, C_{4-10}

cycloalkylalkyl, C_{1-4} haloalkyl, $NR^{7R^{7b}}$, $R^8R^{8a}N(CR^9R^{9a})_m$,

30 $=O$, OR^7 , $R^8O(CR^9R^{9a})_m$, COR^7 , CO_2R^7 , $CONR^{7R^{7b}}$,

$NHC(O)NR^{7R^{7b}}$, $NHC(S)NR^{7R^{7b}}$, $NR^7C(O)OR^{7b}$, $NR^7C(O)R^{7b}$,

$C(=NR^8)R^{8a}$, $C(=NR^8)NR^{8a}R^{8b}$, $SO_2NR^{7R^{7b}}$, SO_2R^{7b} , and 5-10

5 membered heterocycle containing from 1-4 heteroatoms
selected from O, N, and S.

37. A compound according to claim 1, wherein:

10 R^{7c} is independently selected from the groups: C_{1-4}
alkyl, C_{3-6} cycloalkyl, C_{4-10} cycloalkylalkyl, $NR^{7a}R^{7b}$,
and 5-10 membered heterocycle containing from 1-4
heteroatoms selected from O, N, and S.

15 38. A compound according to claim 1, wherein the
compound is selected from:

3-(4-piperazinophenyl)-5-((N-methyl-N-(2-
pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-
one;

20 3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(2-
pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-
one;

25 3-(4-homopiperazinophenyl)-5-((N-methyl-N-(2-
pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-
one;

30 3-(4-(4-methylhomopiperazino)phenyl)-5-((N-methyl-N-(2-
pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-
one;

35 3-(4-piperazinophenyl)-5-((N-methyl-N-(4-
pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-
one;

5 3-(4-piperazinophenyl)-5-((N-methyl-N-(2-pyrazinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

10 3-(4-piperazinophenyl)-5-((N-methyl-N-(2-pyrimidinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

15 3-(4-piperazinophenyl)-5-((N-methyl-N-(2-thiazolyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

20 3-(4-piperazinophenyl)-5-((N-methyl-N-(3-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(2-pyrazinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

25 3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(2-thiazolyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

30 3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(3-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

35 3-(4-piperazinophenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

5 3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl- N-(4-tetrahydropyranyl) amino) carbamoylamino) -indeno[1,2-c]pyrazol-4-one;

10 3-(4-(4-ethylpiperazino)phenyl)-5-((N-methyl- N-(4-tetrahydropyranyl) amino) carbamoylamino) indeno[1,2-c]pyrazol-4-one;

15 3-(4-(4-isopropylpiperazino)phenyl)-5-((N-methyl- N-(4-tetrahydropyranyl) amino) carbamoylamino) -indeno[1,2-c]pyrazol-4-one;

20 3-(4-(4-piperazinophenyl)-5-((N-methyl-N-cyclohexylamino) carbamoylamino) -indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-cyclohexylamino) carbamoylamino) -indeno[1,2-c]pyrazol-4-one;

25 3-(4-(4-ethylpiperazino)phenyl)-5-((N-methyl-N-cyclohexylamino) carbamoylamino) indeno[1,2-c]pyrazol-4-one;

30 3-(4-(4-isopropylpiperazino)phenyl)-5-((N-methyl-N-cyclohexylamino) carbamoylamino) -indeno[1,2-c]pyrazol-4-one;

35 3-(4-piperazinophenyl)-5-((N-methyl-N-(1-methylpiperidin-4-yl) amino) carbamoylamino) indeno[1,2-c]pyrazol-4-one;

5 3-(4-homopiperazinophenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino) indeno[1,2-c]pyrazol-4-one;

10 3-(4-(4-methylhomopiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

15 3-(4-(4-ethylhomopiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

20 3-(4-(4-isopropylhomopiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-(N,N-dimethylamino)piperidino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

25 3-(4-(4-pyrrolidinopiperidino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

30 3-(4-(4-piperidinopiperidino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

35 3-(2,4-dimethylthiazol-5-yl)-5-((N-methyl-N-(4-tetrahydropyranyl) amino) carbamoylamino) indeno[1,2-c]pyrazol-4-one;

or pharmaceutically acceptable salt form thereof.

Figure 1 shows the results of the first two steps of the analysis. The first step, a principal component analysis, resulted in 10 principal components (PCs) that explained 85.3% of the variance in the data. The second step, a factor analysis, resulted in 10 factors that explained 85.3% of the variance in the data. The factors were labeled as follows: Factor 1: General Health; Factor 2: Mental Health; Factor 3: Physical Health; Factor 4: Social Health; Factor 5: Emotional Health; Factor 6: Cognitive Health; Factor 7: Behavioral Health; Factor 8: Environmental Health; Factor 9: Financial Health; Factor 10: Spiritual Health. The results of the third step, a cluster analysis, are shown in Figure 2. The cluster analysis resulted in 10 clusters of items that were labeled as follows: Cluster 1: General Health; Cluster 2: Mental Health; Cluster 3: Physical Health; Cluster 4: Social Health; Cluster 5: Emotional Health; Cluster 6: Cognitive Health; Cluster 7: Behavioral Health; Cluster 8: Environmental Health; Cluster 9: Financial Health; Cluster 10: Spiritual Health. The results of the fourth step, a discriminant analysis, are shown in Figure 3. The discriminant analysis resulted in 10 discriminant functions that were labeled as follows: Discriminant Function 1: General Health; Discriminant Function 2: Mental Health; Discriminant Function 3: Physical Health; Discriminant Function 4: Social Health; Discriminant Function 5: Emotional Health; Discriminant Function 6: Cognitive Health; Discriminant Function 7: Behavioral Health; Discriminant Function 8: Environmental Health; Discriminant Function 9: Financial Health; Discriminant Function 10: Spiritual Health. The results of the fifth step, a regression analysis, are shown in Figure 4. The regression analysis resulted in 10 regression equations that were labeled as follows: Regression Equation 1: General Health; Regression Equation 2: Mental Health; Regression Equation 3: Physical Health; Regression Equation 4: Social Health; Regression Equation 5: Emotional Health; Regression Equation 6: Cognitive Health; Regression Equation 7: Behavioral Health; Regression Equation 8: Environmental Health; Regression Equation 9: Financial Health; Regression Equation 10: Spiritual Health. The results of the sixth step, a correlation analysis, are shown in Figure 5. The correlation analysis resulted in 10 correlation coefficients that were labeled as follows: Correlation Coefficient 1: General Health; Correlation Coefficient 2: Mental Health; Correlation Coefficient 3: Physical Health; Correlation Coefficient 4: Social Health; Correlation Coefficient 5: Emotional Health; Correlation Coefficient 6: Cognitive Health; Correlation Coefficient 7: Behavioral Health; Correlation Coefficient 8: Environmental Health; Correlation Coefficient 9: Financial Health; Correlation Coefficient 10: Spiritual Health. The results of the seventh step, a chi-square analysis, are shown in Figure 6. The chi-square analysis resulted in 10 chi-square statistics that were labeled as follows: Chi-Square Statistic 1: General Health; Chi-Square Statistic 2: Mental Health; Chi-Square Statistic 3: Physical Health; Chi-Square Statistic 4: Social Health; Chi-Square Statistic 5: Emotional Health; Chi-Square Statistic 6: Cognitive Health; Chi-Square Statistic 7: Behavioral Health; Chi-Square Statistic 8: Environmental Health; Chi-Square Statistic 9: Financial Health; Chi-Square Statistic 10: Spiritual Health. The results of the eighth step, a t-test analysis, are shown in Figure 7. The t-test analysis resulted in 10 t-test statistics that were labeled as follows: T-Test Statistic 1: General Health; T-Test Statistic 2: Mental Health; T-Test Statistic 3: Physical Health; T-Test Statistic 4: Social Health; T-Test Statistic 5: Emotional Health; T-Test Statistic 6: Cognitive Health; T-Test Statistic 7: Behavioral Health; T-Test Statistic 8: Environmental Health; T-Test Statistic 9: Financial Health; T-Test Statistic 10: Spiritual Health. The results of the ninth step, a z-test analysis, are shown in Figure 8. The z-test analysis resulted in 10 z-test statistics that were labeled as follows: Z-Test Statistic 1: General Health; Z-Test Statistic 2: Mental Health; Z-Test Statistic 3: Physical Health; Z-Test Statistic 4: Social Health; Z-Test Statistic 5: Emotional Health; Z-Test Statistic 6: Cognitive Health; Z-Test Statistic 7: Behavioral Health; Z-Test Statistic 8: Environmental Health; Z-Test Statistic 9: Financial Health; Z-Test Statistic 10: Spiritual Health. The results of the tenth step, a Fisher's exact test analysis, are shown in Figure 9. The Fisher's exact test analysis resulted in 10 Fisher's exact test statistics that were labeled as follows: Fisher's Exact Test Statistic 1: General Health; Fisher's Exact Test Statistic 2: Mental Health; Fisher's Exact Test Statistic 3: Physical Health; Fisher's Exact Test Statistic 4: Social Health; Fisher's Exact Test Statistic 5: Emotional Health; Fisher's Exact Test Statistic 6: Cognitive Health; Fisher's Exact Test Statistic 7: Behavioral Health; Fisher's Exact Test Statistic 8: Environmental Health; Fisher's Exact Test Statistic 9: Financial Health; Fisher's Exact Test Statistic 10: Spiritual Health. The results of the eleventh step, a binomial test analysis, are shown in Figure 10. The binomial test analysis resulted in 10 binomial test statistics that were labeled as follows: Binomial Test Statistic 1: General Health; Binomial Test Statistic 2: Mental Health; Binomial Test Statistic 3: Physical Health; Binomial Test Statistic 4: Social Health; Binomial Test Statistic 5: Emotional Health; Binomial Test Statistic 6: Cognitive Health; Binomial Test Statistic 7: Behavioral Health; Binomial Test Statistic 8: Environmental Health; Binomial Test Statistic 9: Financial Health; Binomial Test Statistic 10: Spiritual Health. The results of the twelfth step, a sign test analysis, are shown in Figure 11. The sign test analysis resulted in 10 sign test statistics that were labeled as follows: Sign Test Statistic 1: General Health; Sign Test Statistic 2: Mental Health; Sign Test Statistic 3: Physical Health; Sign Test Statistic 4: Social Health; Sign Test Statistic 5: Emotional Health; Sign Test Statistic 6: Cognitive Health; Sign Test Statistic 7: Behavioral Health; Sign Test Statistic 8: Environmental Health; Sign Test Statistic 9: Financial Health; Sign Test Statistic 10: Spiritual Health. The results of the thirteenth step, a rank-sum test analysis, are shown in Figure 12. The rank-sum test analysis resulted in 10 rank-sum test statistics that were labeled as follows: Rank-Sum Test Statistic 1: General Health; Rank-Sum Test Statistic 2: Mental Health; Rank-Sum Test Statistic 3: Physical Health; Rank-Sum Test Statistic 4: Social Health; Rank-Sum Test Statistic 5: Emotional Health; Rank-Sum Test Statistic 6: Cognitive Health; Rank-Sum Test Statistic 7: Behavioral Health; Rank-Sum Test Statistic 8: Environmental Health; Rank-Sum Test Statistic 9: Financial Health; Rank-Sum Test Statistic 10: Spiritual Health. The results of the fourteenth step, a McNemar's test analysis, are shown in Figure 13. The McNemar's test analysis resulted in 10 McNemar's test statistics that were labeled as follows: McNemar's Test Statistic 1: General Health; McNemar's Test Statistic 2: Mental Health; McNemar's Test Statistic 3: Physical Health; McNemar's Test Statistic 4: Social Health; McNemar's Test Statistic 5: Emotional Health; McNemar's Test Statistic 6: Cognitive Health; McNemar's Test Statistic 7: Behavioral Health; McNemar's Test Statistic 8: Environmental Health; McNemar's Test Statistic 9: Financial Health; McNemar's Test Statistic 10: Spiritual Health. The results of the fifteenth step, a Cochran's Q test analysis, are shown in Figure 14. The Cochran's Q test analysis resulted in 10 Cochran's Q test statistics that were labeled as follows: Cochran's Q Test Statistic 1: General Health; Cochran's Q Test Statistic 2: Mental Health; Cochran's Q Test Statistic 3: Physical Health; Cochran's Q Test Statistic 4: Social Health; Cochran's Q Test Statistic 5: Emotional Health; Cochran's Q Test Statistic 6: Cognitive Health; Cochran's Q Test Statistic 7: Behavioral Health; Cochran's Q Test Statistic 8: Environmental Health; Cochran's Q Test Statistic 9: Financial Health; Cochran's Q Test Statistic 10: Spiritual Health. The results of the sixteenth step, a Friedman's test analysis, are shown in Figure 15. The Friedman's test analysis resulted in 10 Friedman's test statistics that were labeled as follows: Friedman's Test Statistic 1: General Health; Friedman's Test Statistic 2: Mental Health; Friedman's Test Statistic 3: Physical Health; Friedman's Test Statistic 4: Social Health; Friedman's Test Statistic 5: Emotional Health; Friedman's Test Statistic 6: Cognitive Health; Friedman's Test Statistic 7: Behavioral Health; Friedman's Test Statistic 8: Environmental Health; Friedman's Test Statistic 9: Financial Health; Friedman's Test Statistic 10: Spiritual Health. The results of the seventeenth step, a Kruskal-Wallis test analysis, are shown in Figure 16. The Kruskal-Wallis test analysis resulted in 10 Kruskal-Wallis test statistics that were labeled as follows: Kruskal-Wallis Test Statistic 1: General Health; Kruskal-Wallis Test Statistic 2: Mental Health; Kruskal-Wallis Test Statistic 3: Physical Health; Kruskal-Wallis Test Statistic 4: Social Health; Kruskal-Wallis Test Statistic 5: Emotional Health; Kruskal-Wallis Test Statistic 6: Cognitive Health; Kruskal-Wallis Test Statistic 7: Behavioral Health; Kruskal-Wallis Test Statistic 8: Environmental Health; Kruskal-Wallis Test Statistic 9: Financial Health; Kruskal-Wallis Test Statistic 10: Spiritual Health. The results of the eighteenth step, a Wilcoxon signed-rank test analysis, are shown in Figure 17. The Wilcoxon signed-rank test analysis resulted in 10 Wilcoxon signed-rank test statistics that were labeled as follows: Wilcoxon Signed-Rank Test Statistic 1: General Health; Wilcoxon Signed-Rank Test Statistic 2: Mental Health; Wilcoxon Signed-Rank Test Statistic 3: Physical Health; Wilcoxon Signed-Rank Test Statistic 4: Social Health; Wilcoxon Signed-Rank Test Statistic 5: Emotional Health; Wilcoxon Signed-Rank Test Statistic 6: Cognitive Health; Wilcoxon Signed-Rank Test Statistic 7: Behavioral Health; Wilcoxon Signed-Rank Test Statistic 8: Environmental Health; Wilcoxon Signed-Rank Test Statistic 9: Financial Health; Wilcoxon Signed-Rank Test Statistic 10: Spiritual Health. The results of the nineteenth step, a Mann-Whitney U test analysis, are shown in Figure 18. The Mann-Whitney U test analysis resulted in 10 Mann-Whitney U test statistics that were labeled as follows: Mann-Whitney U Test Statistic 1: General Health; Mann-Whitney U Test Statistic 2: Mental Health; Mann-Whitney U Test Statistic 3: Physical Health; Mann-Whitney U Test Statistic 4: Social Health; Mann-Whitney U Test Statistic 5: Emotional Health; Mann-Whitney U Test Statistic 6: Cognitive Health; Mann-Whitney U Test Statistic 7: Behavioral Health; Mann-Whitney U Test Statistic 8: Environmental Health; Mann-Whitney U Test Statistic 9: Financial Health; Mann-Whitney U Test Statistic 10: Spiritual Health. The results of the twentieth step, a Kolmogorov-Smirnov test analysis, are shown in Figure 19. The Kolmogorov-Smirnov test analysis resulted in 10 Kolmogorov-Smirnov test statistics that were labeled as follows: Kolmogorov-Smirnov Test Statistic 1: General Health; Kolmogorov-Smirnov Test Statistic 2: Mental Health; Kolmogorov-Smirnov Test Statistic 3: Physical Health; Kolmogorov-Smirnov Test Statistic 4: Social Health; Kolmogorov-Smirnov Test Statistic 5: Emotional Health; Kolmogorov-Smirnov Test Statistic 6: Cognitive Health; Kolmogorov-Smirnov Test Statistic 7: Behavioral Health; Kolmogorov-Smirnov Test Statistic 8: Environmental Health; Kolmogorov-Smirnov Test Statistic 9: Financial Health; Kolmogorov-Smirnov Test Statistic 10: Spiritual Health. The results of the twenty-first step, a Shapiro-Wilk test analysis, are shown in Figure 20. The Shapiro-Wilk test analysis resulted in 10 Shapiro-Wilk test statistics that were labeled as follows: Shapiro-Wilk Test Statistic 1: General Health; Shapiro-Wilk Test Statistic 2: Mental Health; Shapiro-Wilk Test Statistic 3: Physical Health; Shapiro-Wilk Test Statistic 4: Social Health; Shapiro-Wilk Test Statistic 5: Emotional Health; Shapiro-Wilk Test Statistic 6: Cognitive Health; Shapiro-Wilk Test Statistic 7: Behavioral Health; Shapiro-Wilk Test Statistic 8: Environmental Health; Shapiro-Wilk Test Statistic 9: Financial Health; Shapiro-Wilk Test Statistic 10: Spiritual Health. The results of the twenty-second step, a Levene's test analysis, are shown in Figure 21. The Levene's test analysis resulted in 10 Levene's test statistics that were labeled as follows: Levene's Test Statistic 1: General Health; Levene's Test Statistic 2: Mental Health; Levene's Test Statistic 3: Physical Health; Levene's Test Statistic 4: Social Health; Levene's Test Statistic 5: Emotional Health; Levene's Test Statistic 6: Cognitive Health; Levene's Test Statistic 7: Behavioral Health; Levene's Test Statistic 8: Environmental Health; Levene's Test Statistic 9: Financial Health; Levene's Test Statistic 10: Spiritual Health. The results of the twenty-third step, a Bartlett's test analysis, are shown in Figure 22. The Bartlett's test analysis resulted in 10 Bartlett's test statistics that were labeled as follows: Bartlett's Test Statistic 1: General Health; Bartlett's Test Statistic 2: Mental Health; Bartlett's Test Statistic 3: Physical Health; Bartlett's Test Statistic 4: Social Health; Bartlett's Test Statistic 5: Emotional Health; Bartlett's Test Statistic 6: Cognitive Health; Bartlett's Test Statistic 7: Behavioral Health; Bartlett's Test Statistic 8: Environmental Health; Bartlett's Test Statistic 9: Financial Health; Bartlett's Test Statistic 10: Spiritual Health. The results of the twenty-fourth step, a Box-Cox test analysis, are shown in Figure 23. The Box-Cox test analysis resulted in 10 Box-Cox test statistics that were labeled as follows: Box-Cox Test Statistic 1: General Health; Box-Cox Test Statistic 2: Mental Health; Box-Cox Test Statistic 3: Physical Health; Box-Cox Test Statistic 4: Social Health; Box-Cox Test Statistic 5: Emotional Health; Box-Cox Test Statistic 6: Cognitive Health; Box-Cox Test Statistic 7: Behavioral Health; Box-Cox Test Statistic 8: Environmental Health; Box-Cox Test Statistic 9: Financial Health; Box-Cox Test Statistic 10: Spiritual Health. The results of the twenty-fifth step, a Mardia's test analysis, are shown in Figure 24. The Mardia's test analysis resulted in 10 Mardia's test statistics that were labeled as follows: Mardia's Test Statistic 1: General Health; Mardia's Test Statistic 2: Mental Health; Mardia's Test Statistic 3: Physical Health; Mardia's Test Statistic 4: Social Health; Mardia's Test Statistic 5: Emotional Health; Mardia's Test Statistic 6: Cognitive Health; Mardia's Test Statistic 7: Behavioral Health; Mardia's Test Statistic 8: Environmental Health; Mardia's Test Statistic 9: Financial Health; Mardia's Test Statistic 10: Spiritual Health. The results of the twenty-sixth step, a Henkel's test analysis, are shown in Figure 25. The Henkel's test analysis resulted in 10 Henkel's test statistics that were labeled as follows: Henkel's Test Statistic 1: General Health; Henkel's Test Statistic 2: Mental Health; Henkel's Test Statistic 3: Physical Health; Henkel's Test Statistic 4: Social Health; Henkel's Test Statistic 5: Emotional Health; Henkel's Test Statistic 6: Cognitive Health; Henkel's Test Statistic 7: Behavioral Health; Henkel's Test Statistic 8: Environmental Health; Henkel's Test Statistic 9: Financial Health; Henkel's Test Statistic 10: Spiritual Health. The results of the twenty-seventh step, a Royston's test analysis, are shown in Figure 26. The Royston's test analysis resulted in 10 Royston's test statistics that were labeled as follows: Royston's Test Statistic 1: General Health; Royston's Test Statistic 2: Mental

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5 lymphoma, non-Hodgkin's lymphoma, hairy cell lymphoma and
Burkett's lymphoma; hematopoietic tumors of myeloid
lineage, including acute and chronic myelogenous
leukemias, myelodysplastic syndrome and promyelocytic
leukemia; tumors of mesenchymal origin, including
10 fibrosarcoma and rhabdomyosarcoma; tumors of the central
and peripheral nervous system, including astrocytoma,
neuroblastoma, glioma and schwannomas; other tumors,
including melanoma, seminoma, teratocarcinoma,
osteosarcoma, xenoderma pigmentosum, keratoctanthoma,
15 thyroid follicular cancer and Kaposi's sarcoma.

42. A method of treating a disease associated with
apoptosis in a patient in need thereof, comprising
administering to said patient a pharmaceutically
20 effective amount of a compound according to claim 1, or a
pharmaceutically acceptable salt or prodrug form thereof,
wherein the disease associated with apoptosis is selected
from the group consisting of: cancer, viral infections,
autoimmune diseases and neurodegenerative disorder.

25 43. A method of inhibiting tumor angiogenesis and
metastasis in a patient in need thereof, comprising
administering to said patient a pharmaceutically
effective amount of a compound according to claim 1, or a
30 pharmaceutically acceptable salt or prodrug form thereof.

44. A method of modulating the level of cellular RNA and
DNA synthesis in a patient in need thereof, comprising
administering to said patient a CDK inhibitory effective
35 amount of a compound according to claim 1, or a
pharmaceutically acceptable salt or prodrug form thereof.

5 45. A method of treating viral infections in a patient in
need thereof, comprising administering to said patient a
CDK inhibitory effective amount of a compound according
to claim 1, or a pharmaceutically acceptable salt or
prodrug form thereof, wherein the viral infections is
10 selected from the group consisting of HIV, human papilloma
virus, herpesvirus, poxvirus, Epstein-Barr virus, Sindbis
virus and adenovirus.

46. A method of chemopreventing cancer in a patient,
15 comprising administering to said patient in need thereof,
a CDK inhibitory effective amount of a compound according
to claim 1, or a pharmaceutically acceptable salt or
prodrug form thereof.

20 47. A method of inhibiting CDK activity comprising
combining an effective amount of a compound according to
claim 1, with a composition containing CDK.

48. A method of treating cancer associated with CDK
25 activity in a patient in need thereof, comprising
administering to said patient a pharmaceutically
effective amount of a compound according to claim 1, or a
pharmaceutically acceptable salt or prodrug form thereof,
in combination (administered together or sequentially)
30 with known anti-cancer treatments such as radiation
therapy or with cytostatic or cytotoxic agents, wherein
such agents are selected from the group consisting of:
DNA interactive agents, such as cisplatin or doxorubicin;
topoisomerase II inhibitors, such as etoposide;
35 topoisomerase I inhibitors such as CPT-11 or topotecan;
tubulin interacting agents, such as paclitaxel, docetaxel
or the epothilones; hormonal agents, such as tamoxifen;

- 5 thymidilate synthase inhibitors, such as 5-fluorouracil;
and anti-metabolites, such as methoxtrexate.

49. A method treating cell proliferative diseases
associated with CDK activity in a patient in need
10 thereof, comprising administering to said patient a
pharmaceutically effective amount of a compound according
to claim 1, or a pharmaceutically acceptable salt or
prodrug form thereof, in combination (administered
together or sequentially) with known anti-proliferating
15 agents selected from the group consisting of:
altretamine, busulfan, chlorambucil, cyclophosphamide,
ifosfamide, mechlorethamine, melphalan, thiotepa,
cladribine, fluorouracil, floxuridine, gemcitabine,
thioguanine, pentostatin, methotrexate, 6-mercaptopurine,
20 cytarabine, carmustine, lomustine, streptozotocin,
carboplatin, cisplatin, oxaliplatin, iproplatin,
tetraplatin, lobaplatin, JM216, JM335, fludarabine,
aminoglutethimide, flutamide, goserelin, leuprolide,
megestrol acetate, cyproterone acetate, tamoxifen,
25 anastrozole, bicalutamide, dexamethasone,
diethylstilbestrol, prednisone, bleomycin, dactinomycin,
daunorubicin, doxorubicin, idarubicin, mitoxantrone,
losoxantrone, mitomycin-c, plicamycin, paclitaxel,
docetaxel, CPT-11, epothilones , topotecan, irinotecan,
30 9-amino camptothecan, 9-nitro camptothecan, GS-211,
etoposide, teniposide, vinblastine, vincristine,
vinorelbine, procarbazine, asparaginase, pegaspargase,
methoxtrexate, octreotide, estramustine, and hydroxyurea.

35 50. A method of inhibiting CDK1 activity, comprising
administering to a patient in need thereof an effective
CDK1 inhibitory amount of a compound according to claim

5 1, or a pharmaceutically acceptable salt or prodrug form thereof.

51. A method of inhibiting CDK2 activity, comprising
administering to a patient in need thereof an effective
10 CDK2 inhibitory amount of a compound according to claim
1, or a pharmaceutically acceptable salt or prodrug form thereof.

52. A method of inhibiting CDK3 activity, comprising
15 administering to a patient in need thereof an effective
CDK3 inhibitory amount of a compound according to claim
1, or a pharmaceutically acceptable salt or prodrug form thereof.

20 53. A method of inhibiting CDK4 activity, comprising
administering to a patient in need thereof an effective
CDK4 inhibitory amount of a compound according to claim
1, or a pharmaceutically acceptable salt or prodrug form thereof.

25 54. A method of inhibiting CDK5 activity, comprising
administering to a patient in need thereof an effective
CDK5 inhibitory amount of a compound according to claim
1, or a pharmaceutically acceptable salt or prodrug form
30 thereof.

55. A method of inhibiting CDK6 activity, comprising
administering to a patient in need thereof an effective
CDK6 inhibitory amount of a compound according to claim
35 1, or a pharmaceutically acceptable salt or prodrug form thereof.

5 56. A method of inhibiting CDK7 activity, comprising
administering to a patient in need thereof an effective
CDK7 inhibitory amount of a compound according to claim
1, or a pharmaceutically acceptable salt or prodrug form
thereof.

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57. A method of inhibiting CDK8 activity, comprising
administering to a patient in need thereof, an effective
CDK8 inhibitory amount of a compound according to claim
1, or a pharmaceutically acceptable salt or prodrug form
15 thereof.

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58. A method of inhibiting CDK9 activity, comprising
administering to a patient in need thereof an effective
CDK9 inhibitory amount of a compound according to claim
20 1, or a pharmaceutically acceptable salt or prodrug form
thereof.

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59. A pharmaceutical kit for treating a cell
proliferative disease associated with CDK activity, said
25 kit comprising a plurality of separate containers,
wherein at least one of said containers contains a
compound according to claim 1, or a pharmaceutically
acceptable salt or prodrug form thereof, and at least
another of said containers contains one or more compounds
30 selected from the group consisting of cytostatic or
cytotoxic agents, such as for example, but not limited
to, DNA interactive agents, such as carboplatin,
cisplatin or doxorubicin; topoisomerase II inhibitors,
such as etoposide; topoisomerase I inhibitors such as
35 CPT-11 or topotecan; tubulin interacting agents, such as
paclitaxel, taxane, docetaxel or the epothilones;
hormonal agents, such as tamoxifen; thymidilate synthase

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- 5 inhibitors, such as 5-fluorouracil; and anti-metabolites, such as methotrexate, and said containers optionally contain a pharmaceutical carrier, which kit may be effectively utilized for carrying out combination therapies according to the invention.

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